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CORRESPONDENCE.

For the American Bee Journal.

How to Produce the "Coming Bee."

C. J. ROBINSON.

Among progressive bee-keepers there seems to be various speculative ideas concerning the "coming bee," or the manufacture of a breed of bees superior to those obtainable at the present time. Now that the production of honey is looming up as one of the most lucrative branches of industry adapted to many regions of the world, it behooves the producers of that commodity to look about for the best servants to gather in and store the crops of nectar. The soaring bee-keepers are not satisfied with the "scrubs" (bees) of either Continent, or Islands yet explored, and none others exist unless it be the Americanized Italian bee.

The American bee-breeder now has at hand types of all the different species or distinct races of bees from all climes, and in the near future the history of the American merino sheep is to be repeated in the improved Americanized honey bee. The fine-wooled sheep of Spain had been famous for centuries. The "Transhumantes," or traveling flocks, were known as merino sheep. Prior to the introduction of merinos into this country (their exportation was prohibited up to 1802) there were several distinct families, such as Spanish merinos, French merinos, Saxon merinos, and Silesian merinos. In 1802 Chancellor Livingston, American Minister at France, sent to his farm in New York 2 pairs of merinos from the French national flock at Chalons. Col. David Humphreys, of Conn., American Minister at Spain, in 1802 brought home with him a flock of Spanish sheep. In 1810 Mr. Jarvis, Consul at Lisbon, shipped 3,850 to the United States, to be distributed: 1,500 in New York; 1,000 in Boston and Newburyport; the remainder to Philadelphia, Baltimore, Alexandria, Norfolk and Richmond, reserving 350 for himself. Just at that time those Spanish sheep were obtainable in consequence of the French invasion of Spain, and the confiscation of the flocks of the grandees, who had bred these sheep conformable to the natural laws for improvement, as they fancied, during a long period. Each grandee, such as the Prince of Peace, kept a flock of a strain differing somewhat from either of the others. For instance, the said Prince owned the Taulars; the Conde Campo de Alange, proprietor of the Negrettis; then there were the Escurials, Infantados, and Montarcos, besides the Aqueirres. From these several families sprung the improved American merino. And what of the improvement? The best sheep of Spain or the highest bred sheep of Europe only yielded 10 pounds of wool per fleece, as the highest—about one pound of wool to 12 pounds of carcass, while "Gold Drop," the famous $10,000 buck, a good type of the American merino, gave a yield of 40 lbs. of wool annually—4 lbs. of wool to 11 of carcass. This great improvement is a triumph of the American breeder, through a continued "survival of the fittest," by the "relentless hand," through the agency of man. The census return shows a progressive improvement in weight per fleece during each decade for more than half a century.

The history of the improved American merino is parallel with the history of the Americanized breeds of the representatives of domestic husbandry. That which has been done by skillful breeders of domestic animals in this country in the line of improvement may be wrought by the American apiarists. England is no longer the nursery of improved stock, nor has Italy, the Oriental Isles, jungles of Ceylon, Holy Land, or other country ever been the nursery of scientific bee-culture. The whole field for improvement in bee-breeding is yet unoccupied, except, perhaps, a few Americans who have attempted to enter the broad domain of improved breeding.

Upon few subjects connected with domestic economy, probably upon no single one, is there greater need of diffusion of knowledge than in regard to the principles of breeding. Even with professed scientists, who write upon the subject occasionally, the alpha and omega of their philosophy is embraced in the axiom that a "survival of the fittest" by "the relentless hand" of chance is the road to improvement of race or breed. Now, if this axiom be a good one, and our farm animals were now in the condition which nature produced them, and if this condition best subserved the wants of the agriculturist, it would approximate nearer to a sufficient guide in breeding, but with domestication came the disturbing influences, and the effects of these have been deviations numerous and great, changes external and internal in form and in construction.

By virtue of some of these changes great improvement has been attained. Our most valuable animals are, in some sense, a manufactured article—a creation through the agency of man. The object of the bee-keeper, like that of men engaged in other avocations, is profit, and, like other men, the bee-keeper may expect success in proportion to the skill, care, judgment and perseverance with which his operations are conducted. The improvement of domestic animals and insects so as greatly to enhance their individual and aggregate value to render the rearing of them more profitable to all concerned, is one of the achievements of advanced civilization and enlightenment, and is as much a science of triumph and skill as the construction of a railroad, a steamship, an electric telegraph, or any work of arhitecture. The truth is, and it is of no use to deny or disguise the fact, the improvement of domestic animals (including insects) is one of the most important, and, until of late and even now, one of the most neglected branches of domestic economy. Let the ill-favored, chance-breed mongrel, so common, testify. To assert that Dame Chance is the scienced breeder is advocating doctrines countering the teachings of science—scientific bee-culture, and belittles the intelligence and attributes of mankind. If it is true that the *Apis mellifica* of any clime has been perfected by a beautiful "letting alone" and "the severe pruning of the relentless hand of nature," why is it that there should be any difference between the bees of Italy, Cyprus, Syria, and America? Each have been left to the "pruning which nature practices with relentless hand" during centuries. No attempt has been made to interfere with said hand other than to hide domiciled bees in a box of straw or chaff, which beats entirely the hand of nature in relentless pruning. And if it is the fittest that survive such relentless pruning, those that survived the stern ordeal of last winter's pruning must be doubly fittest for perpetuating the race, and the fancied reasons for importing bees that have been "bred under the most trying circumstances," in order to keep "our apiaries from deteriorating," is absurd.

In the case of creating the improved American merino, the breeders did resort to importing the survivers of nature's scrubs, with which to couple in the breeding to give intensity of vigor or preponderance of any desired superiority. And if, as in the improved sheep, bees can be bred that will produce 4 times the amount of honey gathered by the fittest native and European races, it is worth while to give attention to the subject. The improvement of bees by breeding in accordance with the laws of nature, applied scientifically by the hand of skillful physiologists, is as promising, and presents as wide a field of operations, as was that of the sheep.

We cannot say what might have been the original type of the several races of bees, for the inquiry would carry us beyond any record of history or tradition regarding it, but, few doubt that all the varieties sprang each originally from a single type, and that the many variations are due to causes connected with their domestication, and influence of climate and other circumstances.

Now that the renowned tourist, Mr. Benton, has obtained the famous elephantine honey bee (I ignore or drop the Latin), which is said to be a distinct species, why not breed mule and hinny hybrid honey bees? Comrades Jones and Benton have acquired a valid title to fame as enterprising philanthropists. Thanks to their contributions to scientific bee-culture, which opens a wide field for the improvement of races and originating new breeds.

The space allotted me will not allow of my writing of the principles involved in the philosophy of breeding, but in a future article I may attempt to do so briefly.

Richford, N. Y.

For the American Bee Journal.

Getting Rid of Fertile Workers.

J. M. VALENTINE.

Yesterday, from 8 a. m. to 4 p. m., I took off, all alone, 110 section boxes, trimmed them up and pu them away, then took out and extracted 26 gallons of honey, and cleaned up and put the things in the honey house in order, the thermometer ranging from 87° to 97° in the shade. I do not know whether it was a big day's work, as I have not heard others say what they can do; at any rate, I know I was tired enough. Bees are doing well. We have had a good run on white clover, and the bees are now gathering from both clover and basswood. I have taken from 40 to 60 1¼-lb. sections from a number of hives. I did not double up as I should have done in the spring. There are colonies that just now are in good working condition, which, had they been doubled together would have given me 60 lbs. of honey, after which they could have been divided and be as good as they are now. It will not pay to keep a weak colony. I found a colony a few days ago that had a fertile worker. They cast a swarm June 1st, and a few days after a second swarm. As I did not want to use the young queens that were with them, I pinched them all (6 in number) and the bees returned to the old hive. A few days ago I examined them and found they had a fertile worker. I took two empty hives, set one on either side of the old one, and lifted out a frame and put in one, and the next frame in the other, alternating them till all were transferred. After shaking out all the bees I moved the old hive away, and gave each colony a ripe cell. Now each have a fine young queen. Let some one who has a fertile worker try the same process, and report.

I like the Weekly BEE JOURNAL first rate. There is just enough in each paper for one dose—I can digest it all nicely.

Carlinville, Ill., July 2, 1881.

For the American Bee Journal.

An Excellent Canadian Apiary.

WM. F. CLARKE.

There are many excellent bee-keepers, quite unknown to fame, who are pursuing the even tenor of their way, and quietly enjoying their favorite pursuit, without much opportunity of association with those of kindred tastes. I unearthed one of this class on Dominion Day, July 1. A cheap excursion trip tempted me to go to Kincardine, the Lake Huron terminus of our railroad, 57 miles from here. I wanted to see the place and the lake, but was chiefly anxious to ferret out a man who had the repute of being "daft" on bees. Whenever you hear this kind of argument about a man, you may suspect that you are on the track of a scientific apiarist. The multitude regard it as a sign of lunacy for a man to be a close and earnest student of bee-life. Common-sense people, you know, keep bees on the free-and-easy, "go-as-you-please" plan; soon discover that bee-keeping is a humbug; quit it in disgust, and rail against it on every available opportunity.

Mr. George Sturgeon makes tin-smithing his business and bee-keeping his pleasure. I was agreeably surprised to find in his out-of-the-way little town, one of the neatest, best appointed apiaries I have ever visited. It was a holiday, and the proprietor was finding his fun among his bees, which were having a jolly time of it, swarming. Mr. S. is one of those bee-keepers who, after full trial of artificial swarming, prefers the natural way of it. He thinks he gets better queens, more vigorous colonies, and more satisfactory results generally, on Dame Nature's plan. The state of his apiary goes far to justify his practice. A more uniform, nicely marked, even-tempered lot of Italian bees I never saw than these. Mr. S. procured a dozen queens from Tennessee, I forget how long since, and also imported a few direct from Italy. He has practiced judicious selection, and the "survival of the fittest" with such results that if any bee-keeper can go through his apiary, and not break the Tenth Commandment—he is a better Christian than I am. I coaxed my newly-found friend to sell me one of his colonies, and it is now humming away in my garden very musically.

Like my apicultural brethren in general, I am studying up the question of wintering. Now here comes Mr. Sturgeon's experience to complicate things. He wintered ½ his bees in A. I. Root's chaff-packed hive, and the rest in a brick bee-house. All his out-door colonies did well; one, however, proved queenless. Out of 20 wintered in the brick bee-house, he lost 15, and the remaining 5 were rather weak. Of course Mr. S. is enthusiastically in favor of chaff-packed hives. We all praise the bridge that carries us over safely. I should like to know from parties who have tried chaff-packed hives with such diverse results, how these hives were treated in other respects? Had they any shelter, or did they stand out in the open air? Mr. S.'s hives were in a well protected place, close under the lee of a tight board fence, and I am inclined to think that even a chaff-packed hive is none the worse for such a friendly shelter.

We opened some 20 hives to inspect the queens. In several cases we had no need for a puff of smoke, so quiet were the bees. There are no other bees near there, and I think when there is no intrusion of strangers and the consequent quarrelling, pacific habits are formed, a sort of family feeling gets established, and gentleness becomes a characteristic. Why should we not breed for a peaceable and quiet spirit among our bees, if it can be had without the sacrifice of other important qualities?

Mr. Sturgeon is a disciple of A. I. Root's, uses the simplicity hive, and runs his apiary by the "A B C" book. He has made up his mind that he must either quit the tin-smithing or quit bee-keeping. His heart is evidently with his bees, but the care of them encroaches too much on business. He is happier in his apiary than he is in his tin-shop, and my private opinion is that the bees will gain his undivided attention, and that he will make it pay.

Listowel, Ont., July 7, 1881.

For the American Bee Journal.

Common-Sense Apiary.

DR. W. G. PHELPS.

It has been well said that the best evidence of a successful life is for one to succeed. Success, in any channel of life, is only another word for patience and persistency. Success in bee-keeping comprehends the exercise of both these valuable traits of character, and still more, it means the exercise of economy. Observe well these 3 and success will, ordinarily, crown any intelligent apiarist's efforts, close and sharp as may be the competitors in bee-keeping. To receive the greatest aid in practicing these, the average bee-keeper "hankers" after facts, when he searches his bee literature and preserves his JOURNAL. The "old heads" in apiculture may talk learnedly, and the untrained fire off their enthusiasm, but plain hard facts are what we want. While others are hammering away on the wintering problem, or the bee dysentery puzzle (neither of which have ever troubled me, save once, when seduced into using that first-class bee poison, grape sugar), I will try and give your readers directions for getting up a cheap and serviceable foundation machine. In using the columns of your widely-circulated JOURNAL I shall doubtless aid many who are groping in the dark, and save myself the trouble of answering personally the many inquiries that have been directed to me.

Mine is, in some respects, "the old, old story" of utilizing plaster casts to produce foundation. This subject I introduced to the public through the columns of *Gleanings* in 1877, and have ventilated the matter at intervals subsequently. The development of this matter has been a real case of patient, persistent study, forced upon me by economic motives, and I can truly say I have "got it" at last. *Gleanings* for August, 1880, contains an article of mine, giving a general review of what had been done up to that time. The credit due me is of little moment in comparison to the importance of getting a press that will answer every purpose and yet be inexpensive.

My press is made as follows: Two cast or wrought iron pans, ½ inch deep, are hinged together; to the uppermost one a handle 2 feet or more in length is attached; flaps with screw holes are made on the lower pan. Within these pans are accurately arranged and secured the plaster casts, previously run.

Guides of iron are put on each side to conduct the two halves into juxtaposition when brought together. Screw down the lower half to a strong bench, place a sheet of wax, previously softened in warm water, between, and exert a moderate pressure, and your foundation is made in quicker time than it takes to tell it. The sheets of wax I place close by the press in a pan of water, kept at uniform temperature. Of course a dipping apparatus is necessary to previously prepare the plain sheets, as with any other mill or press.

It seems hardly necessary to give directions for making the plaster casts, so often described before, yet I will do so briefly. I place the sheet of foundation, from which I get the casts, on a piece of glass, and rub into each cell, with an old tooth brush, a strong solution of soap. Around, and closely fitting the piece of foundation, I place an iron ring, well oiled. With plaster, mixed thin at first, I pour the same, rubbing it well down into each cell with another old tooth or paint brush. When full, place over and press down well to the iron another piece of glass, slightly larger than the rim, to give a smooth back to your casts. These casts, when taken from the rims, should just fit the pan in press, and when properly hardened with baryta water and soluble glass, will stand a great deal of use.

I will add, for the benefit of economical bee-keepers, that this press need not cost over $6. In my own I use a set screw on the hinge, to regulate the thickness of the foundation I wish to make. Hoping these points may be of benefit to some of your readers, I will close with a "long live the BEE JOURNAL."

Galena, Md., July 8, 1881.

For the American Bee Journal.

The Hive that I Like Best.

L. A. PENNOYER.

Bees are doing well now, but swarm too much. The first day of June I took off 7 two-lb. boxes from one hive, the earliest I ever obtained. I put 10 colonies in the cellar November 15th, and April 15th took out 9 in fair condition. I left 13 on the summer stands in double-walled hives, packed with chaff 4 inches thick, front and rear, and 5 inches at each end. I use the Doolittle hive, except that I build them 18 inches high instead of 12 inches; this gives me 6 inches of chaff above the brood frames, and 6 inches air-space in the cap, with air-holes bored in the side of the cap to give a free circulation above the chaff. I banked sawdust on the ends and rear of the hives as high as the brood chamber, and stood the shade-board in front. Result: every hive except one had combs as bright as in summer; the exception had a little mold in one end. When I opened them, on the 5th day of March, I found from 3 to 5 combs of brood. I have the Gallup frame; there was capped brood within one inch of the bottom of the frame, and eggs within half an inch of the bottom-bar. The colony which had 5 combs of brood is the one from which I obtained the honey June 1st. Early breeding has worked well with me. Those I had in the cellar dwindled badly; I think I should have lost some had I not kept them up with brood from those wintered out-of-doors. A great deal of the loss here was after April 1.

Winona, Minn., June 14, 1881.

For the American Bee Journal.

The Army-Worm and Basswood.

B. T. DAVENPORT.

About a week ago my bees were "weighed in the balance and found wanting." I have but 31 colonies out of the 87 put in the cellar Nov. 20. They were put out and had a good flight on March 18, at which time they were suffering with dysentery, but only 5 had succumbed to "that sleep which knows no waking," and 2 of these had starved. They were put back in the cellar on the morning of the 19th, and remained there until April 15, when I found 15 dead, and more than that many weak. I use the 8-frame Langstroth hive, and for winter put cushions of burlap over the frames, after removing all honey-boards. I think my bees were disturbed too much during the fore part of winter; they should not see a gleam of light, if possible. Our cellar is damp, but well ventilated, and the temperature ranged from 36° to 44°. I believe that ⅔, if not ¾ of the bees in Waushara county are dead, and, as far as I have learned, they are "deader" still in the county east of this, but what are left have just been booming since fruit bloom. I never saw bees get so much honey from dandelions; I had to extract some to give the queens room. Clover is beginning to bloom and promises well. The latter was also true of basswood until the army-worm put in an appearance, and now, in my immediate vicinity at least, nothing but the naked limbs remain, both leaves and blossom-buds being stripped. A Weekly BEE JOURNAL is just what we need and must have. Long may it "be."

Auroraville, Wis., June 2, 1881.

For the American Bee Journal.

A Practical Bee-House.

C. F. GREENING.

In answer to the request for a description of a bee-house that successfully wintered bees last winter, I will describe mine for the benefit of D. S. Kalley, and others. I have studied the requirements of the bees, then tried to meet them. I excavated a pit 12x16x3 feet deep, at the west end of my apiary, and not over 150 feet from the farthest hive. Pit-wall, of brick, to level with ground, wainscotted inside, with 2-inch air-space. Frame 6 feet high on top of wall, of 2x6 studding, using shiplap lumber for insides and ceiling, with 8-inch drop-siding for outside. I filled in the walls solid with dry sawdust. For rafters I took 2x12x12 feet, beveled down to 4 inches at ends, leaving full in the center, filled over ceiling with 4 inches of dry sawdust, making solid from 6 to 4 inches of sawdust from sill to sill, and over-head. Roof-boards lengthwise, 16 feet, then finished with match flooring, coal-tarred together, and ⅜-inch battens to break joints, on top of all, with a good coat of boiling coal-tar over all, making top of house same as freight car roof. I put one 7-inch ventilator through roof and ceiling, 4 feet from each end, letting one extend to within a foot of the bottom of the pit, the other just through the ceiling. The cold air strikes the bottom of the pit and circulates all over the room, while the hot, damp, impure air escapes through the short one. One window in south side of bee-house, with storm sash outside, and another inside, lined around edges with heavy wool cloth. My window is then always clear of frost. One door in east end opens outside, and another door inside, both battened with cloth, with hooks to draw tight. My floor is "mother earth," with 2 inches dry sawdust. My bee-house is always fresh and dry, with no draft, but plenty of air.

If very cold, say 20° to 30° below zero, I close both ventilators with cloth, until the temperature rises in the bee-house, then open short ventilator, and the other as required. The coldest weather last winter, mercury 32° below zero, with a howling blizzard in progress, my pets were closed up, air-tight, comparatively, but no sound was heard inside except their low, quiet, cheerful hum, as natural as a summer night. I keep the window heavily curtained so that it is absolute darkness within. I use a tiny beeswax candle when visiting them, and watch the thermometer closely, and keep it as near the freezing point as possible. A few nights it went some degrees below, but by closing the ventilators a few hours it went up to 35° again.

I place my hives, one row, the strongest, around the outside next to the wall, but not touching it, and 3 rows of shelves around, and stack them up, making 4 tiers, but none touching one another or the wall. Thus I get absolute quiet and darkness (most essential requisites).

In the winter of 1879-80 I had 27 colonies in bee houses, wintered with a loss of only one colony, which starved, through my neglect. In the winter of 1880-81 I had 50 colonies and lost 2 which died with plenty of stores, but no dysentery. Why it was thus I do not know, unless they tired of life. They clustered over 5 frames and died. My 48 colonies came out A 1, after a "total eclipse" of 135 days. Two spring dwindled some and 10 I doubled up, believing that in "union there is more strength."

How my management will work with blacks I do not know; I keep only the best Italians to be had, and

am ready to compare stock with any in America. Bees are just booming now, rolling in white clover. On July 1st I had 9 swarms and saved all. I prepare for winter by setting my hives on a 2-inch square frame, to catch rubbish, take off the covers and cover with heavy duck, with 4 to 6 inches square of wire cloth covering a hole in center of duck cloth.

Grand Meadow, Minn.

Rural New Yorker.

Bees and their Pasturage in Utah.

J. E. JOHNSON.

The bee in Utah is quite a power, especially as we make sugar from neither maple trees, beets or sugar cane, and have only Chinese sorghum and bees to help us to sweetening; all else is imported. Our climate is wonderfully free from moisture and rainfalls are rare, especially in southern Utah; these causes make a scarcity of bee forage growing wild within reach of bee industry. In the northern portion of the Territory winter generally brings enough snow to make the wild flowers bloom more profusely than at this place (St. George). In this country the inhabitants live in villages in the foot-hills, and generally have to go to the river bottoms some miles away to make farms. The towns are provided with water for the gardens, and here the bees are kept. The gardens and orchards furnish forage in a great measure, which together with the wild flowers that bloom early, and the great American bee plant, that grows on sandy wastes and blossoms from January till September, serve to keep these little honey gatherers busy.

Where the fields and lucerne meadows are within 3 or 4 miles from town, there are periods when at the blooming stage of the crops, great help is afforded in honey-making. In some sections the bee plant grows in tracts of many acres, and often borders highways in such a manner as to make bee forage plentiful and rich; in other regions the seed is sown to get it started, after which the plant reproduces itself without further trouble. Where this grows abundantly there is no need of growing plants on purpose for bee pasturage; where it is scarce we plant patches of mignonette, sweet clover, and squash and melon vines, and such garden flowers as are most productive of honey and pollen.

In my long experience of bee-keeping I have found 3 plants superior to all others for the production of honey, viz: the purple-flowered bee plant, next mignonette, and third melilot or sweet clover. The 2 last named will make honey so perfumed as to be far superior to that made of any other plants, and such honey brings fancy prices in markets where it is known and tested. Lucerne makes a nice amber honey and is worked on industriously by the bees, but it does not produce like the plants named above. The mesquite, a shrubby, sprawling tree of the Pulse family, produces a burden of bloom, often twice a year, similar to that of the filbert and chestnut, from which an immense crop of honey is gathered, and some pollen, also.

The lycium and several other honey plants are abundant here. Our average yield of honey would perhaps be about 50 lbs. each season to the colony. Our varieties of bees are Italians and hybrids. In northern Utah the bee industry has been greatly retarded by thousands of cases of foul brood—no case has as yet occurred in southern Utah.

Our Legislature has passed a law providing for the destruction of colonies affected with foul brood, which will materially lend encouragement to the industry. The bee moth is very destructive here to weak and queenless colonies, but in strong colonies there is no danger. Thus far there have appeared no other serious enemies.

To beginners in the business I offer this advice: Do not be in too great haste to increase your colonies or to eat honey—you will get on much faster by going slowly; that is, never weaken your colonies by dividing, or by robbing them of honey; when not rich with honey and full of bees, then 2 frames taken out of a full hive at a time will give room to work. I started here with one colony, for which I paid $15. In 6 years I had 200 colonies, and had lost, by improperly weakening the colonies for increase, an equal number. Had I been more patient I doubt not I might have had 500 strong colonies, and lost none.

In case a colony becomes queenless, it is quite probable there are but few, if any young bees in the hive—now, the young bees are the wax workers, and unless there are some in the hive you cannot get a queen-cell made; the old bees will not do it. When, therefore, a frame of eggs is put into a hive that a queen may be made, be sure to put in also a good quantity of young bees, or the work is profitless. This I have learned by dear experience. A fertile worker is a great nuisance, and difficult to get rid of, but it can be done as easily as anything else, thus: Remove the hive containing the fertile worker several rods from the old stand, and on the old stand place another hive, with a frame of brood and a queen; now take all the frames out of the removed hive and brush off all the bees, and return the frames of stores to the hive in the old place. The workers will return to the old home, accept the queen, and it is done.

Washington, Utah.

For the American Bee Journal.

Robbing Weak Colonies.

S. W. SALISBURY.

The unexpected shortness of the honey crop in many localities seems to develop the tendency of the bees to rob weak colonies. I have tried many expedients described in the books to prevent robbing, with indifferent success. The easiest and most certain way that I know of is to place a decoy hive, partly filled with honey, bedaubed combs, or undrained cappings, in the place of the hive being robbed, having first moved the attacked colony a few feet away. After about 10 minutes I move this colony some distance and give it a new stand. The robbers having all left will return to the decoy hive in force, and there continue operations until they consume its available contents, when they will gradually resume natural work. The bees that belong to the unfortunate colony that return to the decoy hive will finally cluster therein, and can be safely returned to their own colony late in the evening or early in the morning, without loss. In this way I have saved several valuable queens and nuclei, with but little trouble.

Bees wintered without serious loss in this locality; have done only moderately in the way of honey gathering or swarming, and are now mostly idle. Honey is in fair demand at 20 cents for comb, and 15 cents for extracted.

Kansas City, Mo., July 11, 1881.

For the American Bee Journal.

How I Remove the Bees from Frames.

E. M. R.

I wish to say to "H. F. B." that I use a very soft flat brush to remove the bees from frames and surplus boxes. The brush is 3½ inches in width with bristles 4 inches long. I do not know for what use it was intended. I found it among a stock of brushes for sale at a paint and drug store. I first give the frame one good shake, and whisk the balance off lively with the brush. The bees do not dislike it, as a feather; it never hurts nor irritates them. Try it.

Flint, Mich.

CONVENTION NOTES

Read before the S. W. Wis. Convention.

Bee-Keeping for Profit.

ED. PIKE.

Profitable bee-keeping is not now carried on as much as it will be when bee-keepers are in possession of more practical knowledge on the subject. It is a business that needs a great deal of study, and considerable physical as well as mental ability to carry it out with profit. The worker bees, the queen and the drone should be well understood in all stages of development, and the nature of each class the bee-keeper should be thoroughly familiar with, in order that he may start on the sure road to success. There are times when caution should be observed in handling bees, and the when and why should be known, and not guessed at.

Managing bees for study and curiosity is one thing, but making money out of them, year after year, is quite another thing. Keeping bees for a little table luxury is often very expensive, as most classes of this kind over-do the matter, and kill their pets by too much attention. Keeping bees on a large scale, with a vague knowledge of management is something like a large farm poorly managed—considerable expense and small income.

But either bee-keeping or farming on a large or small scale will, and does pay those who have the brains to comprehend the situation, and make all the conditions favorable to success. Bees need more care than the average number of keepers are in the habit of giving them. There are many different cares to attend to, and the neglect of one might prove a loss. Good, white honey, well sealed, should be left in the brood-chamber to last them the year round. Otherwise, if they go into winter quarters with late dark honey, unsealed, the honey is very apt to sour and give them the dysentery, and they die of disease. Worker combs should be kept in the middle of the hive as much as possible, and all drone comb placed in the upper story. A good colony should fill both lower and upper stories of the hive by June in order to obtain the greatest possible amount of honey. Feeding a little liquid honey from the middle of April till June will do a good deal in populating a hive early enough for the honey flow. Swarming means increase of the apiary, and that does *not* mean honey. If there is plenty of forage, and the bee-keeper has help, without too much expense, the increase of the apiary will fill the measure of reasonable expectation. The prevention of swarming means honey. Now, the point, plainly stated, is this: Which will bring us in the most money, honey or bees? If a colony of bees, having surplus honey from the upper story, will bring as much money as their increase, when run for increase, then which course will the most surely bring us profit? From past experience I would run for honey, because the demand for honey is on the increase. Bees are only wanted for honey and wax, and honey and wax only have a commercial value, while the value of bees is limited to the producing classes only, and whether there will be a demand depends entirely on unforeseen circumstances.

Success in this business depends largely on the queens. Old queens should be replaced by young ones whenever they cease to be prolific. With the practical bee-keeper, rearing queens from inferior mothers is always avoided, for reasons that good and prolific queens only are profitable. The real value of good queens is hard to over-estimate, while poor ones are a positive curse. They are worse than useless. Queens can be introduced at any time during the season, but more successfully during a good honey flow. Good queens are known by prolificness, and the vigor and activity of their progeny, and are not limited to any particular race of bees, a mixture of the different races being desirable.

On the supposition that our hives are stocked with good queens, and that at the end of the season we have a large crop of honey, the next problem is successful wintering. Several modes have been practiced, of which many have been quite successful. Yet the past long, cold winter has demonstrated that in the Northern States no mode of wintering is proof against loss. Some of you may inquire, what is the best method of wintering? To this I would say, that it is rather delicate to assert any one method as the best mode. I have always wintered mine in a bee-house made for the purpose. It is much drier than a cellar, and so far as ventilation is concerned, I know the air reaches the bees in a drier and healthier state than in a cellar.

Out-door wintering and double-wall hives I know nothing of, having never tried them. I have been very successful in wintering so far, and so long as I succeed with my bee-house, I shall "let well enough alone." Ventilation is, I think, of great importance while bees are in winter quarters; and upward ventilation is the most essential. In preparing for winter, quilts should never be laid directly on the frames, an open space over the frames is indispensable.

It is the best source by which the moisture can escape and the heat be retained; the bees also can have complete access across the frames; the heat is evenly distributed over the brood-chamber, and the bees will remain on the frame, instead of clustering in small squads between the combs to chill and die. The above reasons, in my mind, are conclusive on this subject.

In conclusion, I would say to those just embarking in the business, acquaint yourselves with the proper wants of the bees at all seasons of the year, and attend to them, otherwise, better let them alone.

Boscobel, Wis.

Local Convention Directory.

1881.	*Time and Place of Meeting.*
Sept.—	—National, at Lexington, Ky.
	—Kentucky State, at Louisville, Ky.
Oct, 6	—Union Kentucky, at Shelbyville, Ky. G. W. Demaree, Sec., Christiansburg, Ky.
11, 12	—Northern Michigan, at Maple Rapids. O. R. Goodno, Sec., Carson City, Mich.
11, 12	—Northeastern Wis., at Berlin, Wis.
12	—Central Ky., in Exp. B'd'g, Louisville, Ky. W. Williamson, Sec., Lexington, Ky.
25, 26	—Northwestern District, at Chicago, Ill. C. C. Coffinberry, Sec., Chicago, Ill.
27	—Central Michigan, at Lansing, Mich. George L. Perry, Sec.
27	—Western Mich., at Berlin, Mich. Wm. M. S. Dodge, Sec., Coopersville, Mich.
1882.	
Jan. 25	—Northeastern, at Utica, N. Y. Geo. W. House, Sec., Fayetteville, N. Y.
April 11	—Eastern Michigan, at Detroit, Mich. A. B. Weed, Sec., Detroit, Mich.
27	—Texas State, at McKinney, Texas. Wm. R. Howard, Sec.
May —	—Champlain Valley, at Bristol, Vt. T. Brookins, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

☞ The Northern Michigan Bee-Keepers' Association will hold its fourth Annual Convention at Maple Rapids, Clinton Co., Mich., Oct. 11 and 12, 1881. O. R. GOODNO, *Sec.*

☞ The Northwestern Bee-Keepers' Association will meet in Chicago, on Tuesday and Wednesday, October 25 and 26. All bee-keepers are cordially invited to attend. It is desired to make this one of the most interesting conventions ever held in the United States. C. C. MILLER, M. D., *Pres.*
C. C. COFFINBERRY, *Sec.*

☞ The Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will hold its next meeting Aug. 30, at Rock City, Stephenson Co., Ill. JONATHAN STEWART, *Sec.*

THE AMERICAN BEE JOURNAL

THOMAS G. NEWMAN.
EDITOR AND PROPRIETOR.

CHICAGO, ILL., JULY 20, 1881.

☞ Carefully read and study the lessons so emphatically taught by the Statistical Tables on this page.

☞ The 21st St. Louis Fair will be held at St. Louis, Mo., Oct. 3 to 8, 1881. Premiums, $50,000.

☞ The *Patron's Guide*, edited and published by Geo. F. Henry, M. D., at Boyd, Ky., commenced its 4th volume this month. It is a well edited and nicely printed weekly, and deserves success.

A New Bee Enemy.—A correspondent in the western part of the State says a small, bright, cardinal bird, something smaller than our common red bird, haunts his bee-hives and devours his bees continually. He wants some of the bee-men to give the name of it.—*Farmer's Home Journal.*

Does Mr. Newman, of the AMERICAN BEE JOURNAL, know anything about this new enemy?—*Pat. Guide.*

The bird mentioned has a bad reputation among bee-keepers. Its peculiarly bright plumage has often led to the error of calling it cardinal bird (*Cardinalis Virginianus*), though they may belong to the same family. This bird is also sometimes called kingbird, which is an error. The kingbird (*Tyrannus intrepidus*) is a small, very stout-built bird, with a short, strong beak, slightly hooked at the point. It is of a bluish color, interspersed with spots of white. It is very combative in disposition, and delights in attacking crows, hawks and eagles while on the wing, which fly to enormous heights to avoid it. Notwithstanding Prof. Cook's enumeration of the good qualities of the kingbird, we always feel tempted to deal summarily with it, as also with the red-bird described, by shooting them on the spot and eulogising afterward.

Beer Adulteration with Glucose.—The German glucose manufacturers have petitioned the Reichstag in reference to the movement to prohibit the use of glucose as a substitute for malt in beer-making. They claim that glucose does not make the beer unhealthful, and plead the nonsensical argument that the prohibition would ruin all potato-growers!—*Exchange.*

Of course, philanthropy is a good pretext for all "crooked" transactions. In this country, the manufacturers of glucose would persuade the unreflecting farmer that without their assistance there would be but a limited market for corn, prices would be unremunerative, agriculture would come into disrepute, and general ruin would befall the country. We are sorry a few—but very few—editors and doctors have found it to their interest to take the same view of the matter, and have displayed the bad taste to attempt to justify the indiscriminate manufacture and sale of glucose and other adulterants.

Losses of Bees Last Winter.

STATISTICAL TABLE.

To make this Table has been a very difficult task—one that has cost many weary hours of steady brain-work—but as it will teach many a valuable lesson we are well paid. Some omitted important points from their reports, and left us to hunt over their old letters to find out what hive they used, or in what way they usually wintered, and, in some instances, we had to conjecture whether they were protected or not from the result they reported. The Table is, therefore, necessarily imperfect, but we have done the best we could to wade through the enormous bulk of writing sent in, to ascertain the simple facts in the case.

In the BEE JOURNAL for June 8, Dr. Tinker reported the results of 10,818 colonies. Those he has since received he has sent to us, and they are included in the following table, which aggregates 521,230 colonies, or about one-sixth of the whole number of colonies of bees in America.

COLONIES WINTERED IN BEE HOUSES.

Hives used.	No. in Fall.	Dead.	Per cent. of Loss.
American	4,468	832	.19
Gallup	2,841	676	.24
Langstroth ...	7,792	1,664	.21
Quinby	762	127	.17
Total	15,863	3,299	.21

COLONIES WINTERED IN CELLARS.

American	9,156	3,096	.34
Box	10,656	4,393	.41
Gallup	4,160	1,664	.40
Langstroth ...	60,217	17,521	.29
Quinby	1,840	644	.35
All others	5,142	2,416	.47
Total	91,171	29,734	.32

COLONIES PROTECTED.

American	28,746	13,680	.47
Box	4,704	2,016	.43
Gallup	5,360	2,304	.43
Langstroth ...	79,424	34,388	.43
Quinby	13,745	6,128	.45
All others	13,904	8,722	.63
Total	145,883	67,238	.46

COLONIES UNPROTECTED.

American	7,363	5,761	.78
Box	196,372	181,296	.93
Gallup	2,342	1,896	.80
Langstroth ...	48,504	30,392	.62
Quinby	3,268	2,416	.74
All others	10,464	7,980	.76
Total	268,313	229,741	.85

SUMMARY.

In bee houses.	15,863	3,299	.21
In cellars.....	91,171	29,734	.32
Protected	145,883	67,238	.46
Total.....	252,917	100,271	.39
Unprotected..	268,313	229,741	.85
Grand total.	521,230	330,012	.63

All that were left on the summer stands, but which were well packed with chaff, leaves, sawdust, straw, or otherwise, are included under the heading "Colonies Protected;" while those left on the summer stands with chaff cushion or other slight protection (or none at all), are classed as "Colonies Unprotected."

In order to make it more perfect, we have added the results of Dr. Tinker's report, as published in the BEE JOURNAL for June 8, 1881, but our figures show a vast difference in the percentage of loss, in the different styles of wintering, because our report is so much larger than his was. His report included some of the most extensive bee-keepers in America, and gave the results in large apiaries with more progressive bee-keepers, as is shown by the fact that while his report included only 3,420 hives *unprotected*, those protected by being "packed with chaff, sawdust or other material," numbered 4,103, or 25 per cent. more than the unprotected. Our reports generally were made by the progressive bee-keepers, who included all their neighbors in the county or district who had left their bees unprotected, and whose losses were enormous. We report, under the heading of unprotected, 268,313 colonies, or nearly 80 times as many as are included in Dr. Tinker's report, while those protected include 145,883, or only 35 times as many as his.

By the above figures it will be seen that no bees in box hives were wintered in a bee house; 10,656 colonies in box hives were put into cellars, where the losses amounted to 4,393, or 41 per cent. Only 4,704 were protected, and of these 2,016 perished (43 per cent.), while 13 times as many were left on summer stands unprotected, and **93** out of every 100 unprotected colonies perished.

Some have argued that bees in box hives and log gums were more safely wintered, because the brood chambers were undisturbed, etc., and that, therefore, we should return to old theories, and discard the progressive ideas of the nineteenth century. As we have been to much trouble in getting up the above table, let us investigate what it demonstrates concerning the hives named:

BOX AND LOG-GUM HIVES.

How Wintered.	No. in Fall.	Dead.	Per cent. of Loss
In cellars.....	10,656	4,393	.41
Protected	4,704	2,016	.43
Unprotected .	196,372	181,296	.93
Total.....	211,732	187,705	.89

AMERICAN HIVES.

In bee houses.	4,468	832	.19
In cellars.....	9,156	3,096	.34
Protected	28,746	13,680	.47
Unprotected .	7,363	5,761	.78
Total	49,733	23,369	.47

GALLUP HIVES.

In bee houses.	2,841	676	.24
In cellars.....	4,160	1,664	.40
Protected	5,360	2,304	.43
Unprotected .	2,342	1,896	.80
Total	14,703	6,560	.45

LANGSTROTH HIVES.

In bee houses.	7,792	1,664	.21
In cellars.....	60,217	17,521	.29
Protected	79,424	34,388	.43
Unprotected .	48,504	30,392	.62
Total	195,957	83,965	.43

QUINBY HIVES.

In bee houses.	762	127	.17
In cellars.....	1,840	644	.35
Protected	13,745	6,128	.45
Unprotected .	3,268	2,416	.74
Total.....	19,615	9,315	.47

ALL OTHER FRAME HIVES.

In cellars.....	5,142	2,416	.47
Protected	13,904	8,722	.63
Unprotected .	10,464	7,980	.76
Total.....	29,510	19,118	.65

RECAPITULATION.

Box hives	211,732	187,705	.89
All frame hives	309,498	142,307	.46
Langstroth ...	195,957	83,965	.42
Other frames..	113,541	58,342	.51
Grand Total ..	521,230	330,012	.63

It will be readily seen that while the average percentage of loss in box hives is 89, in all the frame hives it is but 46—an unanswerable argument in favor of frame hives.

Those who have contended that the Langstroth hive is too shallow for wintering, will be surprised to learn that the figures compare very favorably for it, thus: the percentage of loss in all kinds of frame hives is 46; exclusive of the Langstroth hive it is 51, leaving only 43 for the Langstroth, being 8 per cent in favor of the latter.

Again, this report records the result of wintering in 521,330 hives; 211,732 of which were in box hives, leaving 309,598 for all kinds of frame hives. Of the latter, 195,957 are Langstroths—*i. e.*, shallow frames—and 113,561 of all others combined. So, that, in numbers the shallow frame hives reported aggregate nearly double those of all other kinds combined. Thus in numbers, as well as in the least percentage of loss during last winter, the shallow frames have the advantage.

We really think these figures settle the matter of "the coming frame." Had deep frames been shown to have the advantage, the BEE JOURNAL would have been ready to advocate their universal adoption, for it has no desire to favor any but the most successful methods, hives or implements.

To prevent misunderstanding let it be distinctly understood, that all frames nearest in size and shape to the four types of hives named (*i. e.*, the American, Gallup, Langstroth and Quinby) have been classed as such, no matter by what other names they may be called—our only object being to classify so as to make an intelligible statistical table—useful for reference as well as interesting for the student.

Another valuable lesson is taught by the following comparison: Colonies of bees protected by being placed in cellars or bee houses, or by being packed on the summer stands, number 252,917; of these, 100,271 died—39 per cent.; 268,313 colonies were wholly unprotected, but the loss was 229,741—**85** per cent.—or nearly **thirty thousand more than double the number that died,** out of a like number protected!

These figures will illustrate, better than all the arguments imaginable could do, the advantages of rational, intelligent, progressive bee-keeping, and that it remunerates the apiarist to properly prepare his bees for winter. Notwithstanding the diversity of ways of protecting bees, it will be observed their loss was less than one-half that of those partially or wholly unprotected. They demonstrate, beyond controversy, that nature and nature's ways are not always best, and that the probabilities of loss are stronger against those who "trust to luck" than those who rely upon a combination of industry and judgment.

We would not taunt the "old fogies" who have kept their bees in box hives and log gums, because nature never made a movable-frame hive for them; but we earnestly commend to their consideration the contrast in percentages of loss—box hives 89, all frame hives 46—nearly double, as reported. We have no doubt, however, the proportion of losses was much greater, as thousands of persons in out-of-the-way places have lost the bees in their gums and made no report, considering it no pecuniary loss, as they had never derived any pecuniary gain from them.

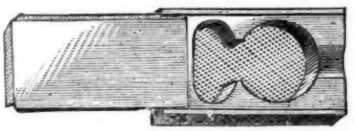
AMONG OUR EXCHANGES.

MISCELLANEOUS.

Queen Cages for Mailing.—Mr. Henry Alley, in *Gleanings*, thus describes the cage he uses:

I shall use a sponge filled with honey instead of sugar candy. Experimenting with candy last year cost me the loss of many queens. I do not lose one queen in 50 with sponge and honey. Now I will explain about the cage. It is made ⅝ inch wide, so as to give more space of sponge to the bees, thus making the food hold out longer. In shipping, the tin might press in, but as I make them the tin is on solid against the wood on all sides, and cannot press in.

In shipping 2, 4, 6, or more queens at one time, I will place the wire face to face, but reversing the sponges, so that the bees in one cage can feed from the sponge in the other. In shipping 3 queens, I will make tin one inch shorter, and cover the sponge with wire cloth, and then the bees in all 3 cages can draw food from their



neighbors. Bees in such cages will live from 2 to 3 weeks. I think the pressure of the wire will hold the sponge in place; if not, drive a sharp nail through the side into it. Half a dozen bees to a cage will be all the company a queen will want.

To put bees in the cage, keep up the corner of wire not nailed down, and raise it with the index finger. The spring of the wire will keep it down. I have done this all my days.

I can bore the holes in them with power, and can do it much quicker than I can nail them up. Then again, the cages used to-day are much stronger and neater. I have put a few bees in them, and covered the tin with paper to keep the bees away from the cold tin.

Honey Show in San Francisco.—The *Semi-Tropic*, California, remarks as follows:

The attractive and interesting display, under the auspices of the Bee-Keepers' Association, formed a center around which the apiarists literally swarmed, intent upon investigating the claims of improved machinery, and testing the contents of the various frames and jars, any one sample of which seemed faultlessly clear and delicious to the uninitiated. One hundred and two varieties of honey producing flowers, prepared by J. W. Wilson, of Pasadena, formed a novel and interesting feature of this exhibition. The decorations of white sage were tasteful and appropriate, and the nectar itself, in jars arranged in pyramidal shape, clear as crystal, supported by frame after frame of comb honey, snowy and inviting, made a picture which cannot be photographed except by the artist memory.

In connection with this department, Mrs. Benedict displayed samples of excellent honey vinegar, almost colorless, and above average in acidity; several samples of fruit preserved in honey with undeniable success, and 3 kinds of honey cake, which elicited the warmest praise from those who were fortunate enough to secure a sample. It is urged, and very plausibly, that fruit cake made with honey is richer and retains moisture much longer than that made of sugar.

Altogether, bee-men have a right to be proud of the honey display in this pavilion. With a product that leads the world's market, a life which is too retired to attract any but the thoughtful and intelligent, and an employment that is both pleasant and profitable, we know of no class more enviable than the apiarists of Southern California.

The Honey Crop in Ohio.—The *Bee-Keepers' Instructor* gives the following concerning the crops of honey in the northwestern part of Ohio:

Up to the first part of this month bees were doing remarkably well, taking into consideration the general weak condition of colonies in the early spring. And while we have heard of no excessive yields, a pretty fair amount of surplus has been stored, while colonies have been increasing to a limitless extent. There has not been any excessive swarming like we hear of in some sections of the country. Bees everywhere, so far as we have heard, are in good condition, but how long this will continue we cannot tell, as we are now suffering from a severe drouth, which, if it lasts much longer, is going to play havoc with our honey prospects. The white clover is dead, and dying; basswood bloom has dried up, and the chestnut, of which we have but little, is about gone. The present indications are that bees will barely gather enough honey for awhile to keep them. Should we have good rains soon we may have a small second crop of white clover. Our main dependence, however, for the rest of the season, will be on fall flowers and buckwheat. So far the season has been very satisfactory. How it will wind up is yet to be seen.

Missouri Apiculture.—In the Independence *Sentinel*, Mr. C. M. Crandall says:

In the immediate vicinity of Independence we find the following gentlemen engaged in apiculture:

L. W. Baldwin has 226 colonies.
P. Baldwin has 140 colonies.
F. J. Farr has 120 colonies.
C. M. Crandall has 75 colonies.
Wm. Parker has 80 colonies.
J. D. Meador has 140 colonies.

The product of these 781 colonies aggregates each year over 20,000 lbs. of honey, which yields not less than $4,000. But this is a mere *bagatelle* of the real business. Hundreds of our citizens throughout the country have from 10 to 100 colonies of these energetic honey gatherers, and the entire crop must approximate 100,000 lbs. Of course, this mostly goes to home consumption, still it is beginning to create quite a handsome revenue.

How to Commence Bee-Keeping.—The *Northwestern Farmer*, published at Portland, Oregon, gives the following very sensible advice:

Successful bee-keeping can be accomplished in no other way than by securing large yields of honey. Large yields of honey can be had only by having everything needed ready for securing it. To begin bee-keep ng with old-fashioned box or stump hives, and expect to make it profitable, is like killing hens to find eggs. Of course the first thing to be looked after is food or honey, for the bees to gather. If, in the vicinity where it is proposed to keep bees, there are plenty of yielding flowers, you are all right and ready to go ahead; but it is absolutely necessary to go ahead aright.

Good hives first. Several forms are offered for sale at about $2 each, with movable frame. A honey extractor is as necessary to large yields of honey as good hives. A honey knife for uncapping comb, bee veils, rubber gloves, a smoker, a lot of extra hives, and last, though not least, a paper devoted exclusively to bee-culture. The AMERICAN BEE JOURNAL is one of the best. With these, though there are other conveniences, one may safely procure a few colonies of Italian bees. We say a few because it is best for the beginner to go slow. A gentleman, resident in the city, whose time is occupied from 7 a. m. to 6 p. m. in other duties, procured 5 colonies of Italians last spring, and gave them such care as he could. The cost and result of his experiment is as follows: Five colonies at $10, $50; 7 new hives at $2, $14, or a total of $64 outlay. He sold 240 pounds of comb honey during the season at 25 cents, $60, and had 7 new colonies of bees at $10, $70. Good as 200 per cent. on his investment.

The Value of System.—The Marshfield (Mo.) *News*, gives the following notice in its last issue:

The AMERICAN BEE JOURNAL is on our table, and, as usual, is filled with matter of value to every apiarist. Bee-culture is an interest that is of far greater advantage to those who engage therein, if conducted systematically and with proper knowledge thereof, than is usually supposed, and this knowledge can only be gained by studying the habits of these industrious insects. The JOURNAL is the oldest publication in this specialty in the United States, having been established 20 years, and we can recommend it to our readers, who are interested in bee-culture, with pleasure.

The *News* has our thanks for its kind notice. We shall endeavor to always sustain the present flattering reputation of the Weekly BEE JOURNAL.

The Crops of the World.—In a country so extensive as America, with climates varied all the way from the torrid to the frigid, the crop of honey will be as diverse as the climate. Speaking of the crops in Europe, we contrast the crop of one country with that of another of the dozen that go to make up the whole. But America comprises as much territory (and diversity of climate) as the whole of the countries of Europe, and crops of all kinds will vary as much, or even more than that of the old world. It is, therefore, not strange to have one pronounce the "crop of honey as unusually large"—that it seems to "rain honey," etc., and another to complain of wet, heat, drouth, and "scarcity of honey"—all are true, and are to be accounted for by the magnificence of the North American Continent.

Of the other crops of the world, the following, from the Chicago *Times*, will be read with interest:

The world seems destined to reap but sparingly this year. The reports from different portions of this country are so uniformly unfavorable that we cannot expect any such harvests as those of the last 2 or 3 years. From Europe the reports were rose-colored a few days ago, but one country after another of the old world is coming forward with doleful accounts of the condition of the crops. The French anticipations of a few weeks ago of being for the first time for some years independent of foreign supplies of wheat, seem to have been dashed by an unfavorable change in the conditions, for the last reports gave promise of only an average crop, but little or nothing beyond that. A Berlin dispatch says that the prospect is that the harvest in Germany will be much worse than it was last year, and that the yield will be only ⅓ or ⅔ of the average. Taking all kinds of grain, and averaging the crops and consumption for the past 10 years, Austria produces 560,000,000 bushels a year, and consumes 530,000,000 bushels, leaving a surplus of 30,000,000 bushels. Germany produces 950,000,000 bushels, consnmes 1,065,000,000, and has to import 115,000,000 bushels. France is pretty certain to need forty or fifty million bushels of wheat alone, and England is always a large importer. A particularly copious yield in Russia would supply western Europe without creating any exceptional demand from the United States, but as the average surplus of all grains in Russia is 180,000,000 bushels, while the average net deficiency of Europe is 380,000,000 bushels, the demand for American grain of all kinds must be considerable. If we have less to export than usual this year, we shall at least get better prices for what we do export, unless there is a great change for the better in the grain-fields of Europe.

Old Comb Honey, Candied.—Inquiries are often made as to what to do with old comb honey that has granulated. Mrs. L. Harrison, in the *Prairie Farmer*, some time ago, gave the followihg plan:

When the honey is marketed all unsightly and unfilled combs are removed, and we find much of it granlated, so that extracting is out of the question. A bee-sister once told the writer that she put all such comb honey into a pan and melted them in the oven, and that when it was cooled the wax would be in a solid cake on the surface, when it could be removed and the clear honey would be underneath. We tried this plan, but the honey was injured by being heated too much. We then tried this way, and succeeded much better: The honey was mashed up in a pan, and set over a kettle of boiling water, and stirred frequently. Before the honey was very hot, the wax had risen to the surface, and being set out in the cold, quickly congealed, so that the warm honey could be poured from under it, through a coffee strainer into another vessel, leaving the wax in the pan. After the honey was melted, the wax was all melted up together, and considerable honey of inferior quality was under it, which can be kept separate and be used for cooking, making gingerbread, etc. The rinsings of vessels used in manipulating the honey will make excellent vinegar. The wax can be melted in a pan over boiling water, and should be poured, when melted, through a hot coffee strainer, and when cool will be of a light straw color.

Management of Section Boxes.—The *Indiana Farmer* says:

As the flow of honey slackens off, take from colonies with more sections than they are likely to finish, and put them in place of full sections removed, contracting the room for surplus honey, if necessary, so as to have all the sections finished as soon as possible. Beginners are apt to add boxes as long as the flow continues, and at the end of the season have a large number only partially filled, which must be kept over or extracted.

Honey and Beeswax Market.

BUYERS' QUOTATIONS.

CHICAGO.

HONEY—But little comb honey is yet upon the market, and the quotations are rather premature. New extracted honey is quite plentiful, and in good demand.

We quote light comb honey, in single comb boxes, 19@21c; in larger boxes 2c. less. Extracted 7@9c.

BEESWAX—Prime quality, 18@20c.

NEW YORK.

HONEY—New honey in 1 or 2 lb. boxes will bring good prices, but as yet there is none on the market, though it is daily expected.

White extracted, 9@10c.; dark, 7@8c.

BEESWAX.—Prime quality, 18@22c.

CINCINNATI.

HONEY.—The market for extracted clover honey is good, at 8@10c.

BEESWAX—18@22c. C. F. MUTH.

SAN FRANCISCO.

HONEY—Market quiet and firm. Stocks very light. Holders not disposed to grant concessions. A sale of 100 cases choice extracted is reported at 8½c.

We quote white comb, 12@14c.; dark to good, 9@11c. Extracted, choice to extra white, 8@8½c.; dark and candied, 7½c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

San Francisco, Cal., July 9, 1881.

SELECTIONS FROM OUR LETTER BOX

Young Bees and Stores for Winter.—The past winter has forced me to the conclusion that plenty of young bees with good healthy stores are of more importance than any kind of hive for wintering. I fed one barrel of coffee A sugar to my weak colonies of bees in the fall, and wintered all of them, while the ones lost were all strong in bees and had forty lbs. of honey in the fall, 2 of which were in chaff hives, but I find that chaff hives or cellars will not give a new lease to the allotted days of old bees.

Dupont, Ind. S. E. O'NEEL.

Dysentery, Foundation, etc. — Following is a list of the losses of bees in this section as far as I now know: D. S. had 22, has 4; W. B. had 5, has 3; A. L. had 3, has none; G. B. had 7, has 3; I. F. had 32, has about 12; D. G. had 13, has 2; L. 147, has 1; we 21, have 19. I think the losses are largely attributable to ignorance and carelessness, as we wintered in the same locality on stores gathered in the same fields, and our loss was no more than might be expected any ordinary winter. On the subject of dysentery I am almost confirmed in the belief that an excess of pollen is the cause. We took up 7 colonies last fall, drove 4 in one and 3 in another hive with empty frames, fed them very little honey, and the rest sugar syrup to winter on, having no pollen whatever, and they wintered with very little loss and no sign of dysentery, while some of the others, having honey and pollen as they gathered it, were more or less affected. The season so far has been very favorable; white clover is just beginning to yield some honey, and we look for a fair amount of surplus if the weather is propitious during the coming month. If a colony is boxed and swarms out, leaving the boxes partly filled, is it best to leave them on the parent colony or move them with the swarm? Why are full sheets of foundation recommended for surplus boxes in preference to only a small piece for a starter? I have reference to the thin foundation.

Pine Grove, Pa. W. H. STOUT.

[The unfilled boxes are usually left with the parent colony. Most bee-keepers claim that the foundation is a great economizer of time in building comb, and that the larger the surface presented, the greater the number of bees accommodated; and if, as some of the most expert honey producers assert, the thin foundation is no detriment to either honey or comb, and no imposition upon the consumer, then the greater the amount used to advantage the more profitable its use. —ED.]

Chaff Packing.—I had 13 colonies packed in chaff which have gone through a rigorous New England winter without loss, while the bees in box hives were dead before June 1, and also those in the Langstroth hives. With 2 exceptions my bees came through the winter very strong. I have just been examining my hives; I have 3 hives with 13 frames in each, literally filled with brood, bees and honey; size of frame 12x16, outside measure. I have used this hive since 1873 and have never had a colony die in them; I have found them queenless and united them with others. One gentleman near here wintered some 10 or 12 colonies in a cellar and lost ½ of them. My bees never dwindle in the spring like those wintered in cellars. Others have wintered in cellars and lost none. Bees are working very briskly, and are gathering honey quite fast. J. T. DAVIS.

Shelburne Falls, Mass.

Plenty of Honey.—I had 12 colonies in the spring, and have 30 now. This is the best season for honey I ever knew. I shall have 1,000 to 1,500 lbs this season, of a very choice article of honey. I. P. WILSON.

Burlington, Iowa, July 7, 1881.

Loss of Bees in Waupaca Co., Wis.—Agreeable to request, I will report the percentage of loss of bees in this county. I find, by careful inquiry, that those left out unprotected are nearly all dead. Of those chaff-packed and left out, 85 per cent. are dead, and of those wintered in the cellar probably 50 per cent. are dead. In many cases a large proportion of this loss is from spring dwindling since they have been carried out, as in the case of my own bees. I wintered in the cellar with a loss of only 10 per cent. until the first week in April, when I carried them out; since then my loss has been 20 per cent. I now have 35 swarms to commence the season with. The bees in this locality are mostly kept in the Langstroth hive—some in box hives yet. My own observation tells me that one of the causes of the great mortality among bees the past winter was in not having them protected until after the extreme cold weather came on; then many of them were removed to their winter repositories with the mercury down to zero. My own experience and observation tell me that in the latitude of Northern Wisconsin that it is desirable to winter in a good, well-ventilated cellar, so arranged that it can be kept at a uniform temperature, ranging from 35° to 40° Fahr. If the cellar is not properly arranged they might as well be left out-of-doors. I can, with the multitude of subscribers of the BEE JOURNAL, say that I most heartily welcome the weekly receipt of it, and very much appreciate the custom of bee-keepers reporting their modes and plans of managing bees, and the results of their efforts; by weighing their experiences in the balance we may benefit each other.

HARVEY FEATHERS.

Royalton, Wis., May 31, 1881.

Transferring.—Bees have done well here this spring. The swarming is about over, and a great many left for parts unknown—more than usual. Basswood bloom is over, and furnished but little honey. Can a novice transfer bees with safety at this season of the year? I like Cook's Manual very much. I. R. WAGGONER.

Grantville, Kan., June 24, 1881.

[The best time to transfer is in the spring, but it can be done at any time. Care should be taken not to injure the brood.—ED.]

Short Honey Crop.—I fear that we may have a poor season for honey. Early in the season we had several weeks of continuous rain; now we have a dry season that is equally disastrous to the honey crop. I really did not know the pleasure I was receiving in perusing the Weekly BEE JOURNAL till I failed to get last week's number. I think its weekly visits are far preferable to a monthly, but I must say I prefer a more convenient size of page, for preservation. S. E. THOMPSON.

Shelbyville, Ky., July 11, 1881.

Snow as Winter Protection.—I used 25 chaff and 17 2-story simplicity hives; I wintered on the summer stands; one was lost by accident and one by starvation; 2 were queenless. Late in the fall the bees were placed in the center of the hive on the fewest combs possible; all of the lower story not occupied by bees and all of the second story were then filled with fine chaff. A 2-frame nucleus in a simplicity hive thus protected wintered quite finely. In mid-winter I frequently raised the lids and found icicles as long as my fingers on the lower side of the lid; the upper surface of the chaff was wet and moldy. At 2 inches deep the chaff was dry, and from 2 to 6 inches (according to the size of the colony) of the chaff next to the bees would not only be very dry, but warm. I did not disturb them during the whole winter, and kept them covered with snow most of the time. M. FRANK TABER.

Salem, O., June 11, 1881.

That Picture.—On the first page of the JOURNAL, for July 6, I find truly "a picturesque apiary, designed by Mr. A. I. Root." It is, indeed, a beautiful *picture*, but it is certainly not practicable. I never saw bee pasturage that would support 450 colonies, profitably, in one apiary, and in swarming time it would take 10 men to handle them, under ordinary circumstances; and with bad weather for a week, there would probably be 75 to 100 swarms in a single day. The *picture* is all that could be desired, probably, but I would prefer to see a bee-house in the center space, with a lawn around it, with bees all around, etc. I think Mr. Root is better on *pictures* than possibilities, or rather, more visionary than practical. I think a *horse railroad* should be added to run all around the walks to carry off surplus, *provided* they get any.

C. F. GREENING.

Grand Meadow, Minn., July 7, 1881.

[The BEE JOURNAL called it picturesque. Mr. Greening says the picture is all that could be desired. Some of the criticisms are right, and just what we like to see. Such a picture, when its faults are pointed out, will make a more lasting impression than pages of words without a picture. We shall all do well to remember the wise saying; "There are flaws in diamonds, flies in amber, and faults in every man." In the discussion of theories we ask no favors, but when we criticise our fellow men let us remember our own imperfections, and chide with love.—ED.]

Short Crop.—The honey crop in Pennsylvania will be short; June was so wet and cool. Honey is pretty plenty now, but it cannot last long. R. B. OLDT.

New Berlin, Pa., July 7, 1881.

My Management.—I have thought sometimes of sending a report to the JOURNAL, not having seen any from this county, and my methods differ so much from the common practice of bee-keepers. I use the Quinby hive, 8 frames and honey-board, no division-boards, no cushions, no chaff or other absorbents, no upward ventilation, the hives ventilated below by raising one inch above the board. On the 18th of Nov., 1880, I put 39 colonies into their room in the cellar under the house. It is warm, totally dark, damp, and well ventilated. I put them out March 17; all appeared as well as when put in, but I put them out too soon, and had to double up some of the weaker ones. I have now 34 that are doing well; blacks and hybrids. There are but few bees left in this county. In this township the assessor informed me he found no bees alive except mine. L. EASTWOOD.

Waterville, O.

Kingbirds and Drones.—I had heard and read so much about chaff cushions and wintering on the summer stands, that I thought best to try the experiment. One trial is enough for me. By the first of February, 6 had gone to return no more. I put the remaining 3 in the cellar and saved them. Mr. Quinby, in his "Mysteries of Bee-Keeping," expressed the opinion that the kingbird destroyed only drones. The same sentiment is also expressed in the revised edition. From recent observation, that opinion seems to me erroneous. My bees were lately very busy about some willow trees in my yard; presumably collecting stores. Two kingbirds, early every morning, were equally busy with the bees. I have never noticed drones out early in the morning, and have never known them to collect stores; hence I am of the opinion that the kingbird destroys workers. That his instinct may teach him to reject the abdominal portion of the insect, and thus avoid the sting, is possible, but does not help the case.

St. Joseph, Mo. S. P. HYDE.

My Second Report.—On June 1st I found my number very much reduced to what it was when I reported in February; then my loss was less than 20, but the cold month of April was the hardest on my bees of any part of winter. The 25 colonies in box hives with which I commenced the winter, now number but 3; of 123 in chaff hives I have lost 46 (21 of them being last year's swarms); they died of dysentery, caused by too much unsealed honey; the others died from different causes, some from failure of old queens and some from bad shaped combs. By careful examination I satisfied myself that there was a good cause for the loss, taking into consideration the long, cold winter, which has taught me one of the most valuable lessons of my life. It should cause us all to make more thorough preparations; then if the winter is mild we are all right, and if severe, the small amount of extra labor will pay us well for the trouble of careful packing and securing proper ventilation, which I consider a very important element in successful wintering. J. M. FRANCE.

Auburn Corners, Pa.

How to Exterminate Ants, etc.—I notice the request for a plan to exterminate "little black ants" from hives of bees. A solution of salt, or dry salt (chloride of sodium), sprinkled where the said ants infest the hives, sends them a "kiting"—an effective means of getting rid of the pests. Try it. Bees love salt as condiment, and I add a pinch of it in their feed. I also notice the request for a receipt for making grafting wax without compounding beeswax with it. A celebrated pomologist published a receipt for compounding a grafting wax made of alcohol, rosin, and spirits of turpentine. I have made and used it, but do not remember the proportion of the ingredients. It has been used by many claiming that it was superior to any other. C. J. ROBINSON.

Richford, N. Y., July 4, 1881.

Honesty and Dishonesty.—Honesty is the offspring of conscience. From this first principle all rules of behavior are drawn. It teaches us the difference between right and wrong; teaches us to shrink from everything evil. There are some men who seem to have no conscience, who come into the world to seek only pleasure and wealth, and care not by what means they are obtained. It is for such men that we need compulsory honesty, and it cannot be demanded on too broad a scale. Adulteration is not confined to honey. We poison our drugs with cheaper material; we sell shoddy for wool; we sell veneering for solid wood; we rob and cheat each other all around, and in every trade and business; we are rapidly destroying our national sense of honesty and integrity. How is it we elect legislators who need petitions presented in order to get them to make laws for the protection of the people? We want laws as broad as the United States, protecting honest and innocent men. We do not want a law shielding honest honey-producers alone, and do not want our law-makers to look at it in that light. We hear the complaints of thousands of other honest men, and we want laws protecting all. There is lots of dishonesty in America. Realize this, and uphold truth and honesty.

Covington, Ky. A. E. FOSTER.

Repairing Losses.—I have been dividing my bees, according to the directions given in the BEE JOURNAL on "Repairing Losses by Division." Had I read the BEE JOURNAL 2 years sooner it would have saved me more than $200. HENRY ZEIS.

Pacific, Mo., June 30, 1881.

SPECIAL NOTICES.

☞ Single copies of the JOURNAL sent postage paid for 5 cents each.

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

☞ When changing a postoffice address, mention the *old* as well as the new address.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Photographs of prominent Apiarists—Langstroth, Dzierzon, and the baron of Berlepsch.—Price 25 cents each.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Because it adds to Personal Beauty by restoring color and lustre to gray or faded hair, and is beneficial to the scalp, is why Parker's Hair Balsam is such a popular dressing. 27w4

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Examine the Date following your name on the wrapper label of this paper; it indicates the time to which you have paid. *Always* send money by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

Premiums.—For a club of 2, *weekly*, we give a copy of "Bees and Honey;" for a club of 5, *weekly*, we will give a Cook's Manual, a Bee-Keeper's Guide, bound in cloth; for a club of 6, we give a copy of the JOURNAL for a year *free*. It will pay to devote a few hours to the BEE JOURNAL.

It is a Foolish Mistake to confound a remedy of merit with the quack medicines now so common. We have used Parker's Ginger Tonic with the happiest results for Rheumatism and Dyspepsia, and when worn out by overwork, and know it to be a sterling health restorative.—*Times.* See adv. 27w4

☞ It would save us much trouble, if all would be particular to give their post office address and name, when writing to this office. We have letters (some inclosing money) that have no name, post-office, County or State.—Also, if you live near one postoffice and get your mail at another, be sure to give the address we have on our list.

CLUBBING LIST.

We supply the Weekly **American Bee Journal** and any of the following periodicals, for 1881, at the prices quoted in the last column of figures. The first column gives the regular price of both:

	Publishers' Price.	*Club.*
The Weekly Bee Journal (T. G. Newman)		$2 00
and Gleanings in Bee-Culture (A. I. Root)	3 00..	2 75
Bee-Keepers' Magazine (A. J. King)	3 00..	2 60
Bee-Keepers' Exchange (J. H. Nellis)	2 75..	2 50
The 4 above-named papers.....	4 75..	3 75
Bee-Keepers' Instructor (W. Thomas)	2 50..	2 35
Bee-Keepers' Guide (A. G. Hill).....	2 50..	2 35
Kansas Bee-Keeper.....	2 50..	2 15
The 7 above-named papers.....	6 05..	5 00
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bee-Culture (T. G. Newman)	2 40..	2 25
Binder for Weekly, 1881.....	2 85..	2 75

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For Monthly Bee Journal, $1.50 less.

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

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THOMAS G. NEWMAN,
974 West Madison Street., Chicago, Ill.

Contents of this Number.

Bingham Smoker Corner.

Oxford, O., June 29, 1881.

Messrs. Bingham & Hetherington, Abronia, Mich. Gentlemen: Your uncapping knife has been well tested in the Apiary of Mr. D. McCord, my neighbor. In his opinion (and I agree with him) it is far in advance of any knife which he has ever used.

Yours very truly, L. L. LANGSTROTH.

Sunny Side, Napa, California, June 10, 1881.

T. F. Bingham, Abronia, Mich. Dear Sir: Please send me by mail two Large, six Extra, and 4 Plain Standard Bingham Smokers. Your four years' old Smoker is still in use, and does good service, the only trouble being it is too small. I require the large size. I have a large and small Quinby (large one condemned), the other I get along with by repairing often. As far as I have tried them I prefer yours above all, and shall keep them in stock. Yours Truly, JOS. D. ENAS.

27w4